

A DEFENSE OF
CAREX INTUMESCENS VAR. FERNALDII

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Recent manuals tend to dismiss *Carex intumescens* var. *fernaldii* Bailey as a northward cline in the species toward narrowed perigynia. Gleason (1952) merely mentions this, and in a later manual (1963) ignores it entirely. Radford, Ahles and Bell (1968) specifically submerge the variety. If only dimensions of perigynia were involved this would appear to be valid. There is, however, a style character not mentioned in these manuals, including that of Fernald (1950), who recognized varieties of *C. intumescens* on ancillary characters.

Prevailing descriptions of *C. intumescens* hold that the style throughout the species is straight or slightly contorted (arcuate would be more descriptive). In keying specimens I recently obtained from eastern Canada, I noticed that inside mature perigynia the achenes had styles which were more than arcuate. The lower half of the style executed a half- to complete coil on a horizontal, or near horizontal, plane, as does the style of *C. lupulina* Muhl. I found this generally true in specimens with ripe narrow perigynia from boreal eastern North America. More southerly plants, with wider perigynia, had the usual straight to arcuate (on a vertical plane) styles. Descriptions of the varieties, as I recognize them, follow:

Carex intumescens Rudge var. **intumescens**: The lustrous perigynia conic-ovoid, 5-8 mm. wide at widest point near base; achenes broadest near middle, acuminate rounded to tip; style of *mature* achene straight or vertically arcuate. Florida to Texas to Maine, Nova Scotia, southwest Quebec to Wisconsin. Rare or absent in boreal parts of the range, abundant southward.

Carex intumescens var. **fernaldii** Bailey: The lustrous perigynia lanceolate to lance-ovoid, 3-5 mm. wide at widest point near base; achenes broadest above middle, with a pronounced shoulder rounding abruptly to tip; style of *mature* achene with a half- to single distinct coil in basal

half. Newfoundland to Manitoba to northern and western New England, New York, and northern Pennsylvania, Michigan to Minnesota. Also in high mountains of Virginia and North Carolina. The prevailing variety in boreal eastern North America.

The prevailing keys treating sect. *Lupulinae* Tuckerm. use degree of style contortion, in part, to separate the first two groups of species in the section. With the style character of *C. intumescens* var. *fernaldii* redefined, the keys lose some dependability to separate this species. It is suggested that reference to style character be dropped from the first legs of keys. Remaining characters are sufficient to separate the first two groups of species. Style character is more useful in succeeding legs of keys.

Until such time as transplant studies prove or disprove the constancy of style character of the varieties of *C. intumescens*, they should be recognized. Style contortion is probably a corollary of confinement imposed by perigynium sides, i.e., the narrower the perigynium, the more contortion might be expected. The biological significance and taxonomic value of the character of degree of style contortion in this and several other species of *Carex* requires experimental determination.

LITERATURE CITED

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